

# CALIFORNIA'S HEALTH

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Editor

## EARLY PUBLIC HEALTH IN CALIFORNIA

By GUY P. JONES

### CHOLERA OUTBREAK EPISODE IN 1850

Baneroft, in his "Inter Pueula," relates an interesting story with relation to the cholera outbreak of 1850 in Sacramento. The presence of nearly 100 patients in an adobe building near Sutter Fort, housed in a single room 70 feet long and 30 feet wide, was disturbing to a youth who was not a cholera patient, but who was confined among the victims of the epidemic. Baneroft's report follows:

A reckless youth of 22, named Prudon, whose home was in Louisiana, being put financially upon short allowance by his father for having lost money betting on Clay's election—a game the boy did not understand, as the father said—set out for California overland and after trying his fortune unsuccessfully at Placerville, then Hangtown, he continued his journey and arrived at Sacramento in the midst of the cholera season of the autumn of 1850. The streets, swarming with teams loaded and loading, presented to the one just from the lonely, dusty plain a stirring scene, and the hotels, taverns and gambling saloons were so much to his liking that he concluded to settle there.

He had been educated by his father for the presidency of the United States, and as he had understood that it was necessary to undergo certain routine before seating himself in the White House, he determined now to adopt the profession of politics, whereupon he ratified his determination by taking a drink. Selling the poor mule that had carried him from the Mississippi River, the proceeds of which constituted his entire capital, he chose a hotel on a par with his pretensions, and after a substantial luncheon he bethought him of letters from home and started for the postoffice.

The steamer had lately arrived, and at the window was a line of 150 or 200 men, at the foot of which he was obliged to take his place and wait his turn. It

was a tedious process, standing and stepping at long intervals, as one after another was served. The sun poured down hot, and the young scapegrace, feverish and thirsty from his fatiguing journey hailed a passing watermelon cart, and bought and ate, bought another and another. Thus in due time he reached the window but found no letters.

To console himself for the loss of so much time and attending disappointment, he treated himself to a glass of brandy and water, and as it pleased him he took another. This caused him to feel so well that he concluded to take several more so that he might feel better; in fact he would feel his best.

Brandy in doses sufficiently strong and frequent, taken directly after watermelon, when the system is somewhat reduced by travel, and the still, incandescent air is epidemic with disease, often makes one feel like retiring; so our young Louisianan sought his bed, and soon was sleeping heavily. Strange to say, about three o'clock he awoke with violent pains and called for a physician. The doctor came and dosed him. He was comfortless; no more brandy and watermelon now. He kept up, though he knew the cholera had clutched him. It seemed to him the streets were full of hearses, and once he caught a driver closely eyeing him as if casting in his mind about how long it would be before his services would be required.

Day after day he grew weaker, and finally was confined to his room. The landlord gave him up, and disliking him to die in his house lest it should frighten away his guests, he recommended him to the hospital. A long, low adobe building at the fort, a little distance out, was used for that purpose. Our young friend was not much pleased at the thought, but he was now so weak that he could not offer much opposition. The hospital wagon was ordered round, and the sick man was carried out on a mattress. Another invalid was called for and taken in, who was yet more ill; at all events he groaned fearfully all the way out.

The ride and the fresh air seemed to revive Prudon, and when he reached the hospital he was able to stand alone, and while they were carrying in his fellow-passenger, he seated himself in a chair that stood under the verandah which ran round the building. Just then a small-pleasant-looking man in a green cap and tassel made his appearance at the door.

"I say stranger," ventured Prudon, "can I have a glass of water?"

"Why, are you a patient?" asked the little man.

"I should say I was," replied Prudon. "I came here in that wagon."

Much to the joy of Prudon, who was very thirsty, the little man disappeared within the door with alacrity. He soon returned, but instead of water he held a book in his hand, and approaching the invalid he opened it and drew from his pocket a pencil.

"What is your name?"

"Prudon."

"Give it to me in full, if you please; and have you any friends here, and where is your home?"

"Answer me one question first," replied the patient, now growing weak and irritable, "why are you so particular about all that?"

"So that in case you die, you know, I may be able to write home for you."

Prudon began to feel that he was indeed booked for the next world, and looked at the small door cut through the thick adobe as the opening to his grave. He now asked to be taken in, for he was getting weak again, and was almost choked with thirst. The little man called two attendants, who took him up, and entering the door laid him on a bed. The room was about 70 feet in length by 30 in width, and contained nearly 100 invalids in every stage of the disease. They were stretched on cots ranged in rows across the room. Some were groaning and some were cursing, but most of them lay quite still. They were cared for as well as might be at such a time and in such a place, but it was pitiful to see them lying there alone, and dying alone, and at such a fearful rate. For every morning when the attendant went round he was sure to find three or four of them cold and stiff, having died without a word, and apparently without a struggle. Of such, the attendants merely straightened the limbs and covered the head with the blanket; then taking up the cot, they carried it out at the back door, put the bodies in a rough board coffin and stacked them up to be carted away. Truly, never went man so far to find a death so sad.

Our Louisianan friend did not like this night dying, and so he took care to waken early in the morning, that he might not be carried out and boxed up asleep. A good doctor helped him through, however, and in time he was convalescent. Then with returning appetite, how he thought of home, and longed for something from mother's table!

Discharged at last, he walked or rather crawled, one morning into the city, ragged, dirty, and without a dollar in money. After walking about some time, weak and fainting, he seated himself upon a step. Matters were getting serious with him. He was not yet fit for work, although he was well enough to leave the hospital; but to earn or make or get his dinner and a place to sleep, he had not the remotest idea how or where. For-

tune now smiled on him in a way he least expected. Seated thus, he saw crossing the street one he should know. Could it be possible, Caleb Anderson, his old friend and college mate? "Cabe!" he shouted. The man turned and looked at him, looked earnestly. He saw it all. Dress, feature, attitude—what volumes were written there to the friend who could read them! Approaching his old comrade, he lifted him up, and drawing his arm within his own, he led him away, speaking scarcely a word. The meeting of friends, often under circumstances the most peculiar, each of whom has come to California unknown to the other, if told upon the pages of fiction would be pronounced improbable. Prudon's troubles were over, and he was soon in a position to help others, as he had been helped.

### LETTERS FROM LOGAN

Dr. Thomas M. Logan, who became the first Secretary of the California State Board of Health upon its organization in 1870, arrived in Sacramento in 1850, shortly before the historical outbreak of cholera occurred in that city. Under date of October 26, 1850, and again on November 30th of the same year, he wrote to his brother-in-law, Dr. Fenner of New Orleans, relative to his early experiences in California. These letters follow:

Sacramento City, California  
October 29, 1850

DEAR DOCTOR: My memory has recently been recalled to a letter received from you some time since, requesting information concerning "the state of medical affairs in California" by a coincident, the narration of which shall be the initial of my present long-deferred response. In the course of my professional pursuits, I received under my care a gentleman from New Orleans, who formerly kept the drug at the corner of Camp and Julia streets, suffering under all the symptoms of lead-cachexia, which I diagnosed and treated as such. Finding, however, that the pains of the limbs, especially of the knees, calves, of the legs, ankles and feet, were persistent, and suspecting that there was some local cause which kept up these distressing symptoms, I advised my patient to remove for a short time from the drug store, in which he was here also engaged, and try the efficacy of pure air in the country. As I anticipated, his health rapidly improved under the change, and in a few days he returned to his accustomed avocations, entirely relieved. I was still at a loss to account for the cause of this attack, as my patient had told me he kept no paints in his store, when my attention was arrested by a notice of the eighth article of the first volume of your Medical Reports, in the weekly *Crescent* of your city, which has just been received by mail, and in which you attribute the cause of the epidemic colic which prevailed in New Orleans during the summer of 1849, to lead imbibed in soda water. This induced me to investigate my patient's case again, when, in corroboration of your views, he told me that he was in the daily habit of cleaning out the lead pipe

attached to his soda fount, which was always more or less covered with the oxide of lead, and that he was in the frequent practice of partaking of the supposed salutary beverage. Upon my mentioning the suspicions your report created in my mind respecting the origin of his sufferings, he then told me, as confirmatory of my views, that he was remarkably susceptible of the lead poison; so much so, that he was attacked in New Orleans, during the summer of 1848, in a precisely similar manner as he recently was, and that his physician attributed his malady to his merely tasting a little of the carbonate of lead in his store, for the purpose of ascertaining what it was, as the label had become effaced. I mentioned this occurrence because I deem it strong evidence in support of your conclusions, and congratulate you upon the important hygienic discovery you have made, and which is calculated to prevent so much suffering and distress.

In reply to your inquiry respecting "the state of our Profession in California," I am sorry to inform you, that, like many articles of merchandise with which our country has been flooded, we physicians are at the most ruinous discount, and the ancient and time-honored doctorate is in most cases held in so low repute that many a worthy physician studiously conceals his title. I have seen M.D.'s driving ox-teams through our highways—laboring in our streets like good fellows—serving at bar-rooms, monte tables, boarding houses, etc., and digging and delving among the rocks and stones, to gather together their allotment of California's produce, the precious gold. Labor, however, is honorable to man, and it is not because some are obliged to put their shoulder to the wheel, that the profession is rated at so low a standard. It is because many, and among them those who assume without any moral or legal right the title of Doctor, in their grasping cupidity, and impatience to amass in the shortest possible time their "pile," have, while taking advantage of the necessities of their sick, and dependent fellow-creatures, drained the poor miner of all his hard-earned dust, be it more or less, for a few professional visits. These instances of medical rapacity have become so numerous and aggravated as to create a distrust on the part of the community toward the profession generally and to bring odium on its practitioners. Hundreds who are able to pay a reasonable fee, would rather perish than lose all their means of support in satisfying the exorbitant demands of a physician. I do not suppose that in any part of the civilized world such enormous fees were ever charged and collected, as have been exacted in California; and I herewith insert, a few of the items copied from a recent fee-bill of a Medical Society of San Francisco, which professes to be reduced down to the present less inflated conditions of monetary affairs:

For a single visit, or advice in a case in which no further visits are required.....	\$32
For each visit in which the physician is in regular attendance, or for advice at his office.....	16
When detained, for each hour.....	32
For a written opinion or advice to a patient.....	50 to 100
For a night visit.....	30 to 50
For a visit as consulting physician during the night.....	100
For vaccination.....	32
For a post-mortem examination, in a case of legal investigation.....	200

For a case of ordinary labor, or accouchement.....	\$200
For the operation of turning, in accouchement.....	500
For the operation of a cataract.....	1,000
For trephining.....	1,000
For the operation for strangulated hernia.....	1,000
Etc., etc., etc.	

As to the health and climate of California, I now speak from experience when I affirm that we have all been grossly deceived. The prophetic Benton spoke wisely, when he said the gold would prove a curse to the country; while the too-highly gilded report of Butler King has caused many a disappointed immigrant to lament bitterly his own credulity. I have passed two rainy and two dry months in San Francisco—have traveled through one month of spring and two months of summer among the northern mines, and have resided near three months of summer and fall in Sacramento City, where I am now actively engaged in the practice of my profession, and during all this period I can conscientiously say that I have not passed one perfectly well or pleasant day. In San Francisco during the rainy season, the streets are one perfect quagmire, and there is no getting through them without wearing the stoutest kind of boots, that reach up above the knees; and which are worn, ex necessitate, outside the pantaloons. The wind, which is blowing strong almost constantly, causes the cold rain to drive so as to render an umbrella nearly useless, and consequently catarrhs, pneumonia, diarrheas, and other afflictions, so easily brought on by the surface becoming chilled, and the blood driven upon the vital organs, prevail to a great extent. During the dry and summer season, the dust is as disagreeable and unhealthy as the rain of winter; and the prevailing violent wind, which sets in about 10 o'clock, causes the temperature to become so cold as to render an overcoat absolutely necessary for health and comfort. The deaths by diarrhea alone were last winter estimated at about 30 per cent in proportion to the cases.

In Sacramento City, about three-fourths of a degree north of San Francisco, a totally different climatic condition obtains. The climate and topography resembles much that of New Orleans; and while the heat of the day is excessive and oppressive, in consequence of the want of refreshing breezes, the mornings and the evenings are chilly and uncomfortable. This is generally the case throughout the whole valley of the Sacramento, except that farther in the interior, among the mining regions, the solar heat is more intense. At Coloma, or Sutter's Mill, where the gold was first discovered, and which may be considered the heart of the mining districts, the thermometer frequently stands at 95 to 100 degrees Fahrenheit at meridian, and on the 30th of June last it reached as high as 125 degrees in the shade, at the hotel where I then was.

The following tables present the mean thermometrical range for the months of June, July, August, and September, 1850, in Sacramento City. During the month of June, the afternoons and evenings were rendered invigorating by cool breezes. On the 13th and 18th the wind was northwest; during the rest of the month it varied from south-east to south-west—gen-



erally south. The temperature for the month was as follows:

8 A. M. ....64 degrees	4 P. M. ....77 degrees
M. ....74 degrees	7 P. M. ....66 degrees

During the month of July, also, the character and general direction of the wind was the same, and the following is the table of the mean temperature:

6 A. M. ....59 degrees	4 P. M. ....87 degrees
M. ....85 degrees	7 P. M. ....76 degrees
2 P. M. ....82 degrees	

The mean temperature for the month of August was:

6 A. M. ....58 degrees	4 P. M. ....93 degrees
M. ....83 degrees	7 P. M. ....79 degrees
2 P. M. ....89 degrees	

As during September we had several copious showers, indicative of the commencement of the beginning of the rainy season, I subjoin the following weekly averages of the mean temperature:

First Week	Third Week
6 A. M. ....57 degrees	6 A. M. ....61 degrees
M. ....83 degrees	M. ....81 degrees
2 P. M. ....88 degrees	2 P. M. ....85 degrees
4 P. M. ....87 degrees	4 P. M. ....85 degrees
6 P. M. ....78 degrees	6 P. M. ....78 degrees

  

Second week	Fourth Week
6 A. M. ....55 degrees	6 A. M. ....59 degrees
M. ....73 degrees	M. ....84 degrees
2 P. M. ....77 degrees	2 P. M. ....87 degrees
4 P. M. ....75 degrees	4 P. M. ....79 degrees
6 P. M. ....69 degrees	

During the present month, October, the days have been uniformly cool and pleasant; the thermometer seldom rising, since the first week, above 76 degrees. The wind has generally prevailed from N.N.W., and the nights have been so cool as to render two or more blankets necessary for comfort.

Of course I cannot yet speak positively of the winter months, but I am told they are so mild that vegetation is scarcely checked; ice seldom forms, and even when it does, it is never thicker than ordinary window glass. For the great difference between the climate and temperature of San Francisco and this place, we must look to the geographical position, prevalence of winds, and other causes which produce the differences of the mean annual temperature of places under the same parallel of latitude. Were I to draw an isothermal line between Sacramento City and one of our Atlantic cities, I should incline it towards my native city, Charleston, S. C., making a deviation of about six degrees toward the south; whereas, a similar line drawn from San Francisco, would, I believe, (for, having no data, I cannot speak positively), reach a point several degrees farther north of Charleston. This flexure of the isothermal curve, in passing from west to east, is not so great in the American as in the old continent; but the difference between the mean annual temperature of two localities so nearly situated to San Francisco and Sacramento City, is remarkable.

I have been thus particular in my remarks respecting the temperature, winds, etc., up to the present time, in order to exhibit some data on which to

predicate an opinion respecting the probable prevalence of cholera, which has just appeared among us, and as preliminary to a few observations respecting 'the prevailing diseases of California.' I have already mentioned the deplorable mortality by one disease alone, diarrhea, in San Francisco. I cannot say whether such continues to be the case now, as I can obtain no statistics from which to make a computation. My foregoing estimate of 30 per cent mortality was formed from what I witnessed personally while engaged in the practice of my profession in San Francisco last winter and spring, as physician to 'the Strangers' Friend Society.' As my health began to break down under the rigors of a climate so uncongenial to my habits and temperament, I left there in April, in order to recruit my exhausted energies by an excursion among the mining regions, and subsequently settled here in August last. My present observations will, therefore, be based upon my experience in this city and neighborhood; and as diarrhea is the disease of California, I will proceed to give my views respecting it.

If, philosophically speaking, what is commonly called diarrhea, is merely a symptom of different pathological states, the scientific physician often finds it extremely difficult to decide upon the true nature and seat of the disease. It is to be regretted that we are far from having attained to that perfection in pathology which enables us to decide with positive certainty in all cases of diarrhea; still, in the present instant, I am satisfied, after much patient observation and autopsical investigation, that there exists in the intestinal mucous membrane some form or degree of inflammation.

On the 7th of October, the steamer *Caroline* arrived at San Francisco, from Panama, and was reported to have had on board during her passage 22 cases of cholera, of which number 14 died. She was not quarantined. Since this period several well-marked cases and deaths of cholera have occurred at San Francisco, where the disease still exists. There is now but little apprehension entertained of its assuming a malignant type in that city, and I am disposed to think that the usually prevailing high winds there are of favorable influence against the spread of the disease.

In Sacramento City, as we have already seen in our climatic account, there are no happy influences whatever operating in our favor; on the contrary, there is every reason to apprehend the worst. The first case I saw or heard of was brought to my hospital on the 18th October. The patient was in that stage presenting severe gastro-enteric irritation; the tongue dry—thirst excessive—rice-water evacuations up and down frequent—skin cold and clammy, and pulse rapid, small and irregular. In addition to these incontestable symptoms, the countenance was anxious, ghastly and shrunk—the voice feeble, and the superior as well as inferior extremities contracted with spasms. I notified my associate, Dr. Greenman, of my views of the case, in which he coincided, and we treated him with large doses of creta ppt. with Sydenham's laudanum, sinapisms, and infusion of chamomile, flavored with a little Cologne water, for drink. Under this treatment our patient soon rallied, and in the course

of 12 hours was comparatively well. The next, which was reported in the city papers as the first case, occurred on the 18th of October. The patient was visited by Dr. Spalding, the city physician, who pronounced it cholera, and the man died in 24 hours from the time of his attack. From this period the disease has continued to occur more frequently. On the 22d, eight deaths by cholera were reported in the daily papers; on the 23d, five deaths; on the 24th, seven deaths; on the 25th, 13 deaths. I regret that my engagements at the present time prevent me from dwelling more at large on the subjects embraced in this communication. At some future date, I purpose reverting to the history of cholera in California. Until then, adieu:

Yours respectfully,

T.M.L.

Sacramento City, California  
Nov. 30, 1850

DEAR DOCTOR: According to the promise expressed in my last letter, of the 29th October, I now proceed to give you some account of the cholera which has ravaged our young city. As I apprehended, our worst fears have been realized—for never, in the history of this cosmopolitan disease, since its first appearance in the Gangetic delta in 1817, and its subsequent progress around the globe, which it has at last encompassed, has any visitation been so destructive and appalling. In the short space of 28 days, i.e. from the 19th October, the day the first death was reported, to the 15th November, when the number of deaths had tapered down to only one or two per diem, and the subsidence of the epidemic now publicly announced in the papers, the cholera has carried off 364 victims, out of a population of 6000. The like mortality is unprecedented, and only to be surpassed by the Black Death and awful plagues of the fourteenth century. Even in Paris, in 1832, when I first encountered the disease, and where the mortality was regarded as excessive—amounting to 18,000 out of a population of 800,000, the proportionate number of deaths was not so great, by more than one-half: there, only one in 44 died; but in Sacramento City, one out of every 17 inhabitants fell a victim to the scourge, and this too is a most moderate calculation, based solely upon the mortuary record of the two principal coffin-makers and undertakers. Doubtless many others were interred by friends of the deceased, whose names have never been published; for I know by experience that there was a greater demand for interments at one time than the undertakers could comply with. One of our city papers states that a friend, who has taken the pains to count the graves in the two cemeteries of this two year old city, makes the number 1170—of which 700 were made during the late epidemic; and yet the total number of deaths from all diseases, as recorded, amounts to only 481, as follows: Deaths from cholera, 326; disease unascertained, 38; other diseases, 117. Many therefore, must have died and been interred, of whom no record whatever was taken; so, surely, there can be no overshooting the mark, when I add the 38 deaths by disease unascertained to the 326, which were positively known to be by cholera.

As regards the amount of the population, there can be no possible error, for the census was completed during the prevalence of the epidemic. Among other interesting statistics annexed to this census, I find 90 physicians embraced in the population, and it gives me unqualified pleasure to state, that notwithstanding the imputations cast upon the profession, and to which I alluded in my former letter, this portion of our citizens met the emergency, and performed their duties with an unflinching firmness and fidelity worthy of all honorable mention. Amidst the general panic and scattering flight in every direction, the physicians of Sacramento nobly stood their ground, faced the terrific foe, and did all that man could do, as well to ward off the common danger by precept and example, as to rescue the attacked. I apprehend not the charge of self-glorification, when I adduce the strong evidence to substantiate my assertions, that 14 from among our ranks now swelled the black catalogue of victims. And what a gratifying commentary does this fact furnish of the beneficial results of our liberal institutions and their moral fruits, when contrasted with the former condition of medical affairs here? In the renowned colleges of Castile, under the special control of a royal junta, whose prerogative once extended over this far-distant country, the degree of *Medico-Cirujano* was never conferred without the most solemn oath being exacted from the candidate, with his right hand on the book of the Evangelists, that he "will assist with all care and diligence the sick who shall invoke his aid, and, contemning all dangers and contagions, furnish the solaces of his most worthy profession to the indigent entirely without reward." No such solemn declaration is required in schools and colleges, but under the moral suasion of our free government, and the example of the illustrious patriots who have exalted the character of the nation, our graduates go forth imbued with the American spirit of usefulness—with a sense of duty, far more stringent than any legal obligation, and, confronting every difficulty in the hour of danger and distress, vie with each other in the emulation of working for a public good.

The idea has generally obtained, that sex has a considerable influence in predisposing to cholera. This alleged predisposition, which has been rather sustained heretofore by observation, does not consist, as I conceive, in sex, but in the kind of occupation and the exposure of the women. As statistical information, therefore, for comparative proportions, I would recall the fact, that the mortality here was by no means as excessive among the female portion of the population as among the male. The total of the frailer and fairer portion of our community amounted, as by the census, to the very limited number of 460: of these only 17 died, or one out of 27; and the majority of these were among the abandoned class. This fact goes to corroborate the often-repeated observation, that the better classes of communities—at least those who are well taken care of—are not so liable to the disease.

Without assuming to assign positively the causes of the inscrutable pestilence which is the subject of the present letter, I proceed to offer you for publication, some further observations which I have made,

more as a contribution of facts respecting its appearance here, than a detailed account of its phenomena, which have been so often minutely and graphically described. I have, in my former letter, acquainted you with the meteorological occurrences in our city during the past summer, previous to the appearance of cholera, for a reason that a knowledge of these phenomena, taken collectively with other concomitants, is generally thought important in attempting to arrive at an opinion respecting the origin of the disease. I have likewise previously alluded to the topography of this city, stating that it resembled New Orleans. This resemblance is now the more notable, inasmuch as the whole city is almost circumvallated by a levee, in order to provide against the annual inundation, when the rivers become swollen with the melted snows of the Sierra Nevada. When I visited this place the early part of last spring, it was nearly all under water, and the only way I could get along through the streets was on little foot bridges, or in a canoe. Whether the exhumation of the soil, necessary for the building of the levee, has had any influence in the causation of cholera, I am unable at present to decide, but I deem it proper to call attention to this circumstance, because many believe a telluric origin to be the true one, and for this purpose I have noted a strong case in point. On the 18th October, before a single case of cholera had occurred, the schooner Montague left this city with forty-three passengers, bound for Panama. On the morning of the 22nd, she arrived in San Francisco, with six of her passengers lying dead on board. Dr. Rodgers, the health officer of the port, boarded her at 11 o'clock A.M., and reported the following deaths: On the 19th a passenger, who was buried at Benicia on the 20th; On the 21st at 4 P.M., another passenger, after eight hours' illness; at 7 P.M., a lady; at 9 P.M., another passenger, and at 11 P.M. a foremast hand; at 3 o'clock A.M., on the 22nd, the second mate and another passenger also died. The captain and four others remained sick on board. The doctor stated that the disease was cholera. No other cause is assigned for the sickness on board, except that the schooner was ballasted with surface soil taken in at Sacramento City. I have, in my last letter stated that the first case I saw or heard of occurred on the evening of the 18th October. This man had just come in from the country, and stopped at my hospital in the suburbs, unable to proceed on his way into the city. Whether he had communication in any manner, directly or indirectly, with San Francisco, or the passengers of the steamer Caroline, which arrived at that city, from Panama, on the 7th October, with the cholera on board, I am unable to say, as he left the hospital, in order to save expenses, with the cholera fever on him, while I was out, and before I questioned him, as I intended doing, on these points. T. M. L.

The result of this war confirms again that all violence is useless, all oppression impermanent, all tyranny a breeder of hate. There is only one permanent, constructive force—love.—Getulio Vargas.

### CALIFORNIA EPIDEMIOLOGY IN 1858

In 1858, at the Convention of the State Medical Society, Dr. Thomas M. Logan, who organized the California State Board of Health in 1870, reviewed the epidemics that had occurred in California during the preceding years. Some of his comments are decidedly interesting at the present time.

In opening his paper he says, "Equally important, in a medical point of view, as an efficient registration of a country's meteorology, is that of births, deaths, and marriages." In an attempt to secure data upon which to base his report, Dr. Logan had compiled records of the different undertakers in Sacramento to make a report on mortality dating from April, 1850, to January, 1858. The tables that he compiled show the mortality for each month of each year according to cause of death, sex, age and nativity. He also calculated the ratio of numbers of deaths to the population. His objective was the establishment of a standard which might serve for purposes of comparison during future years. He expressed regret that the State Society had not acted upon his suggestion made during the preceding year, 1857, that blank forms for the monthly reporting of diseases should be printed and placed in the hands of all physicians, relative to this Dr. Logan said, "This grand desideratum, which the New York State Medical Society has succeeded in consummating, takes precedence, in our estimation, in importance over the results to be obtained from a registration of deaths; for, if all the 'cases' of 'disease' which occur in the State can be accurately enumerated, we shall possess a view of its sanitary condition far more clear and distinct than can be obtained from the former only. Take, for instance, any one disease—say diarrhoea; even if we have accurate information of the number of deaths produced by it, we can form only a partial estimate of the strength of its prevalence; but with a statement of the whole number of 'cases' which occurred in the State, or any particular section of it, we would have a perfect basis for our estimate. Had the suggestion we submitted last year been carried out California would have had the honor of setting a worthy example in this respect; as it is, the Empire State takes the lead in the movement, which commends itself to the patriotism and 'esprit de corps' of every member of the profession."

In recounting the prevalence of diarrhoea among immigrants to California in the early days, Dr. Logan referred back to the physical suffering and hardships encountered along the overland route, that reduced physical stamina was of importance to the profession in a field where diarrhoea flourished. Concerning this condition, Dr. Logan said, "Never in the whole history of the immigration into this vast continent, from the



landing of our Pilgrim Fathers on the Atlantic border down to our last halting place on the Pacific, has there occurred such an amount of suffering and disease as has resulted since the discovery of gold in California. The almost interminable plains, now strewn broadcast with the bones of thousands of the bravest and noblest of our adventurous people, attest the truth of this assertion. Some, surmounting by a moral heroism—unrivalled in the history of the most arduous campaigns—the arid desolation of hundreds of miles; after enduring unheard-of privations and struggling successfully through months of continuous travel over the prairies, laid down within a pishah-view of the long promised land, to perish from famine among the defiles of the Sierra Nevada; whilst others, capable of enduring greater fatigue and suffering—men of indomitable will and iron resolve—breathed out their last hopes of life, ultimately overcome by disease, even in the possession of the glittering bauble, which had stimulated them to reach the goal of their desires. As it was with those who traversed the plains, so it was with such as made the transit of the Isthmus; the effects of which we will soon consider, briefly; for it would require pages to recount the results of the accumulated sufferings which all the earlier immigrants, by whatever route, had to endure to a greater or less degree.

"The medical philosopher, looking back on the harrowing account of these scenes, which, while they attest the courage and enterprise of the Anglo-Saxon race, sicken us with the extent of suffering; and knowing well to appreciate the effects, not only of such prolonged physical suffering, especially the bad diet, and exposure to the vicissitudes of the weather, but also of the attendant moral evils—the disappointment under perilous circumstances and the unexpected delay in schemes to which the brightest hopes were attached—is therefore prepared to expect the recurrence of any or all of these diseases, which the triumphant march of hygienic medicine may have driven from the abodes of man. In meeting, then, with symptoms corresponding to the distempers known to him only in the pages of history—the history of those ages when, in our ancestral England, civilization was so little advanced that the food of the Londoners, for six months in the year, consisted of the dried meat of animals, which could not be subsisted in winter because hay was unknown; and when Catharine of Arragon, Queen of Henry VIII, was obliged to send to the Netherlands for a salad, he at once discovers the 'fons et origo' of the disease which figures so largely in our Mortuary Tables of 1850 and '52. It was not scurvy alone, however, which engendered the so-called diarrhoea, to which we now allude. A constipated, rather than a loose state of the bowels, is the more ordinary accompaniment of the former chchexy. "But if

to that tainted state of the system," as Surgeon Muir writes, respecting the diarrhoea of the Crimea, to the Inspector General, "which we represent by the term scorbutic diathesis, we superadd the effects of insufficient food, exhausted physical energy, and depressed moral powers, we shall be brought nearer to the true origin of the disease, and be better able to understand why the strain of this general diseased state should have been exerted on the bowels; these organs furnishing the readiest outlet for that serious exudation of the blood, induced by its general impoverishment and scorbutic alteration."

The term "diarrhoea" has strictly no distinct pathological significance, but as the word holds a place in the nomenclature of symptomatic diseases, it hence has a practically useful, conventional meaning in its present application, which is readily understood. Fourteen-and-a-half per cent of all the deaths from other diseases, during the year 1850, attest the unusual malignity of this disorder, and prove that 'something more than looseness of the bowels'—something different from the ordinary diarrhoea, which results from a sudden check to the perspiration, deranging the balance of the circulation, and throwing the blood inwards upon the bowels, was at work. This latter form of diarrhoea was also then, as is now, frequently met with in California, and seems to be due to atmospheric changes—to the difference of temperature between day and night. But the type of diarrhoea, to which we now make allusion, was essentially anaemic; exacting a very different kind of treatment. The patient's countenance presented, generally, a sallow, dusky hue, and when the skin was examined, petechiae, or other evidences of a scorbutic diathesis, were observable. The tongue was generally clear, but the mucous membrane of the mouth was more or less pale—the gums spongy—and the skin dry and harsh. There was little or no febrile movement of the pulse. The appetite was good—often ravenous. No epigastric or abdominal tenderness was discoverable. The stools were frequent and copious—sometimes watery, sometimes semiconsistent—and of every shade of color from chalk to chocolate; occasionally of a pinkish hue and not unfrequently bloody. Such were the prominent symptoms. Medicines were of no use, unless combined with, or employed conjointly with such articles of diet, the abstraction or want of which is the proximate cause of scurvy. Autopsical investigation revealed features of the corresponding pathological conditions that might be anticipated. The mucous intestinal surface was generally pale, with here and there ecchymosed patches; and in the colon slight ulcerations were sometimes discoverable. Most of the shut cavities

presented evidences of effusion, while the liver was pale, anaemic, and atrophied."

Mostly, his discussion before the State Medical Society had to do with diarrhoea, cholera and scurvy. The idea that weather conditions were responsible for the rise of these diseases was very common and in the background there was always the opinion that living conditions were, to a certain extent, related to the prevalence of disease. Dr. Logan said that he took exception to place upon the record as resulting from eight years of practical experience in California "that the modifications of diseased action met with on the Pacific are almost altogether of an authentic character—requiring for the most part a tonic and stimulating mode of treatment, and very intolerant of the lancet, or depletory remedies of any kind."

In conclusion Dr. Logan said that most of these intestinal diseases that had been in California owed their prevalence to accidental causes and could hardly be regarded as endemic. He regarded some forms, however, as intermittent fever and diarrhoea as endemic, but since they have been found to be under the influence of preventable conditions and the control of science and civilization, he thought that it was proper to claim an exemption from endemics—certainly of a malignant kind—for our "salubrious State." The tables that he had compiled showed that 47 per cent of all deaths in Sacramento during the preceding eight years were "zymotic," which under the classification at that time included epidemic, endemic and contagious diseases.

"In reference to the geographical distribution of diseases—we believe, that the true philosophy of the 'causa morborum' as far as California is concerned, will be found in the combined influence of the meteorological and physiological conditions modified by temperament, and that the varieties of diseases, as cholera, diarrhoea, typhoid fever, etc., here met with, depend greatly, if not entirely, for their manifestation, on the mode of life (hygiene), of the inhabitants. The history of the diseases we have traced reveal this—their appearance and disappearance depending upon the mode of life of our inhabitants, and the increase and decrease of the comforts and ameliorations of society."

Finally, Dr. Logan referred to the fact that the control of these diseases depends greatly, if not entirely, upon the hygiene of the community. This was a prophetic point of view to hold in 1858, decades before the discovery of causative factors in communicable intestinal diseases were understood.

## MATERNAL DEATH RATE DROPS

There was a decrease of 15.6 per cent in the maternal death rate in 1944. In 1943, 358 maternal deaths were registered in California, as compared with 302 such deaths registered in 1944. This would indicate that, in spite of the unusual conditions that exist because of the war, mothers have received adequate care in childbirth.

## MORBIDITY REPORTS—SELECTED DISEASES— CIVILIAN CASES TOTAL CASES FOR MARCH AND TOTAL CASES FOR JANUARY THROUGH MARCH 1945, 1944, 1943 AND 5 YEAR MEDIAN

Selected diseases	Current month				Cumulative			
	March				January through March			
	1945	1944	1943	5-yr. median	1945*	1944	1943	5-yr. median
Chickenpox.....	7,084	6,739	9,242	6,457	18,730	14,152	22,108	14,152
Coccidioid Granuloma.....	1	2	2	.....	9	6	5	.....
Conjunctivitis—acute infectious of the newborn (Ophthalmia Neonatorum).....	1	9	3	.....	5	12	11	.....
Diarrhea of the newborn.....	.....	.....	3	.....	2	4	4	.....
Diphtheria.....	881	119	111	81	370	364	337	282
Dysentery, bacillary.....	19	31	28	.....	91	82	82	.....
Encephalitis, infectious.....	2	8	5	.....	14	16	10	.....
Epilepsy.....	166	154	189	.....	392	332	480	.....
Food poisoning.....	44	92	23	.....	66	218	176	.....
German measles.....	1,746	3,208	7,836	.....	3,931	4,904	11,292	.....
Influenza, epidemic.....	82	428	272	666	322	10,436	780	8,392
Jaundice, infectious.....	28	46	22	.....	77	93	51	.....
Malaria.....	11	5	7	5	27	20	16	16
Measles.....	4,674	11,357	3,640	3,640	9,587	15,490	5,918	5,648
Meningitis (Meningococcus).....	87	164	130	15	252	422	277	47
Mumps.....	5,500	5,084	3,930	3,930	14,092	10,640	8,445	8,445
Pneumonia, infectious.....	344	536	621	363	1,281	1,775	1,533	1,147
Poliomyelitis, acute anterior.....	7	20	18	10	37	65	60	60
Rabies, animal.....	61	123	90	52	132	247	156	156
Rheumatic fever.....	76	48	38	.....	205	106	70	.....
Scarlet fever.....	1,551	1,548	793	664	5,025	3,521	2,219	2,219
Smallpox.....	.....	1	2	1	1	15	3	4
Tuberculosis:								
Pulmonary.....	632	819	801	616	1,929	2,006	1,892	1,827
Other forms.....	50	39	43	39	140	111	120	111
Typhoid fever.....	4	16	14	16	19	37	25	37
Typhus fever.....	3	3	2	.....	14	4	7	.....
Undulant fever.....	16	24	12	17	57	53	36	49
Whooping cough.....	1,454	516	1,903	1,403	3,728	1,104	4,697	3,508
Veneral diseases:								
Chancroid.....	24	41	24	.....	67	103	44	.....
Gonococcus infection.....	2,280	1,778	1,391	1,321	6,577	4,363	3,026	4,205
Granuloma inguinale.....	4	3	3	.....	16	9	4	.....
Lymphogranuloma venereum.....	25	25	19	.....	62	74	32	.....
Syphilis.....	2,513	2,833	3,723	2,014	7,212	6,983	7,447	5,738

\* January and February corrections included.

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